

WHAT IS CLAIMED IS:

1. A DNA molecule comprising a DNA sequence encoding a peptide which inhibits the cytotoxic effect of TNF but does not block TNF binding to the p75 TNF receptor, said peptide comprising the antigen binding portion of an antibody which binds to the fourth cysteine rich domain of the p75 TNF receptor, which domain consists of the sequence of amino acid residues 163 to 201 of SEQ ID NO:2, or to the region between said fourth cysteine rich domain of the p75 TNF receptor and the cell membrane, which region consists of the sequence of amino acid residues 202-257 of SEQ ID NO:2, with the proviso that said antigen binding portion is not that of a monoclonal antibody from the clone 67 (CNCM No. I-1368).

2. A DNA molecule comprising a DNA sequence in accordance with claim 1 which encodes a peptide comprising the antigen binding portion of an antibody which binds to the amino acid sequence of residues 163 to 185 of SEQ ID NO:2, with the proviso that said antigen binding portion is not that of a monoclonal antibody from the clone 67 (CNCM No. I-1368).

3. A DNA molecule comprising a DNA sequence in accordance with claim 1 which encodes a peptide comprising the antigen binding portion of an antibody which binds to the p75 TNF receptor in a region which comprises Thr-179 to the end of

the extracellular domain thereof, which region consists of the sequence of amino acid residues 201-257 of SEQ ID NO:2.

4. A DNA molecule comprising a DNA sequence in accordance with claim 1 which encodes a peptide comprising the antigen binding portion of monoclonal antibody 67 (CNCM No. I-1368), which fraction binds to TBP-II.

5. A DNA molecule hybridizing to a DNA molecule according to claim 1 and capable of expressing a peptide which inhibits the cytotoxic effect of TNF but does not block TNF binding to the TNF receptor.

6. A replicable expression vehicle comprising a DNA molecule according to claim 1, and capable, in a transformant host cell, of expressing the peptide encoded by said DNA molecule.

7. A host cell transformed with the replicable expression vehicle of claim 6.

8. A prokaryotic host cell according to claim 7.

9. A eukaryotic host cell according to claim 7.

10. A process for the production of a peptide which inhibits the cytotoxic effect of TNF but does not block TNF binding to the TNF receptor, comprising culturing a transformed host cell according to claim 7 and recovering the peptide expressed thereby.

11. ~~An anti-idiotypic antibody to a peptide or antibody which peptide or antibody inhibits the cytotoxic effect of TNF but does not block TNF binding to the p75 TNF receptor, said peptide or antibody comprising the antigen binding portion of an antibody which binds to the fourth cysteine rich domain of the p75 TNF receptor, which domain consists of the sequence of amino acid residues 163 to 201 of SEQ ID NO:2, or to the region between said fourth cysteine rich domain of the p75 TNF receptor and the cell membrane, which region consists of the sequence of amino acid residues 202-257 of SEQ ID NO:2.~~

12. A method of inhibiting the function of the natural ligand receptor of the TNF/NGF receptor family, comprising bringing to the vicinity of said ligand an antibody of the 67 group or the anti-stalk region.

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Q4 13. A method in accordance with claim 12, wherein said extracellular domain of said receptor is TBP-II and said antibody is a peptide or antibody which inhibits the cytotoxic effect of TNF but does not block TNF binding to the p75 TNF receptor, said peptide or antibody comprising the antigen binding portion of an antibody which binds to the fourth cysteine rich domain of the p75 TNF receptor, which domain consists of the sequence of amino acid residues 163 to 201 of SEQ ID NO:2, or to the region between said fourth cysteine

rich domain of the p75 TNF receptor and the cell membrane,
which region consists of the sequence of amino acid residues
202-257 of SEQ ID NO:2.

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~~2~~ 14. A method in accordance with claim 13, wherein
said peptide or antibody comprises the antigen binding portion
of an antibody which binds to the amino acid sequence of
residues 163 to 185 of SEQ ID NO:2.

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15. A method in accordance with claim 13, wherein
said peptide or antibody comprises the antigen binding portion
of an antibody which binds to the p75 TNF receptor in a region
which comprises Thr-179 to the end of the extracellular domain
thereof, which region consists of the sequence of amino acid
residues 201-257 of SEQ ID NO:2.

16. A method in accordance with claim 13, wherein
said peptide or antibody comprises the antigen binding portion
of monoclonal antibody 67 (CNCM No. I-1368).